



ADEXON[®]

Adexon-FC180EI
Technical Information

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Adexon-FC180EI

Vertical fire curtain certified to 180 minutes integrity and insulation rating

Description

The Adexon-FC180EI is our highest specification curtain, designed to limit and control the spread of fire for 180 minutes at over 1000°C, and stops the spread of heat from one side of the curtain to the other for 180 minutes. It achieves the product rating of 180 minutes integrity (E) and 180 minutes insulation (I).

The system is tested and certified to BS EN 16034:2014. Operation is via a 24V DC tubular motor controlled by an electronic control board. The system is available in sizes up to 17 meters high and 22 meters wide to suit all site requirements. It has gravity fail-safe to ensure that the system will deploy to its fire-operational position so that you have protection irrespective of whether power is maintained or not.

Our standard lead time is between 6 to 10 weeks from approval of drawings. Optional extras such as Emergency Retract Buttons and Obstruction Warning are available upon request.

Applications

The Adexon-FC180EI is suited to many different applications; some of the most common are:

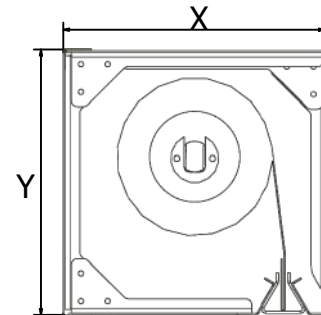
- Protected means of escape
- Insulation compartmentalisation
- Combustible areas
- Protecting fire-rated glazing
- Basement car parks



Headbox sizes

Manufactured from 1.2mm thick galvanised steel, the headbox is designed to have the smallest form factor possible to fit discretely into ceilings. Headbox sizes change based on the fire curtain size requirements. Headboxes are available in all standard and non-standard PPC colours. For any technical drawings, please contact admin@adexon-uk.com.

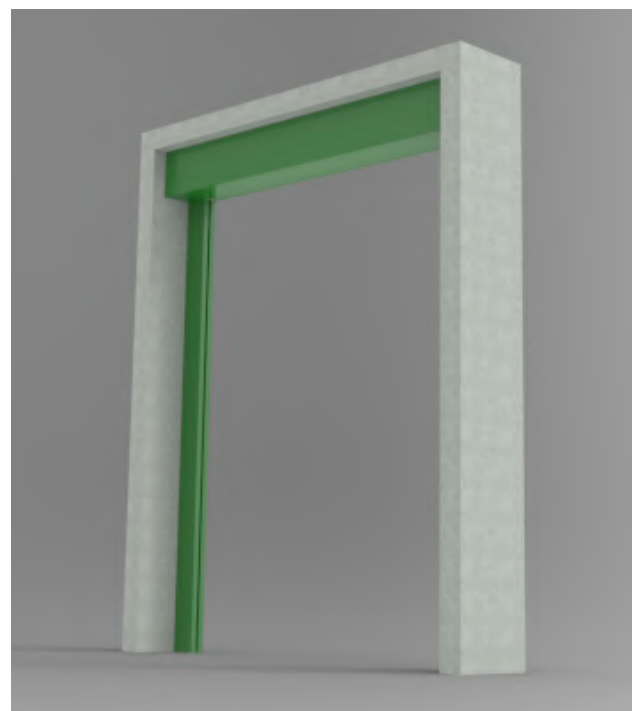
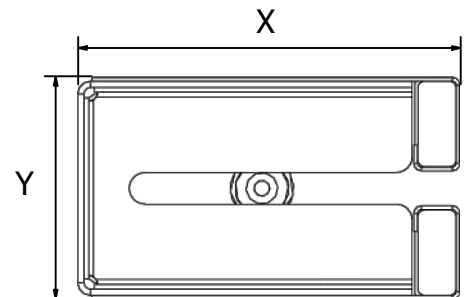
Fire Curtain Width	Fire Curtain Height	Side Guide Dims	
		X	Y
3,500mm	8,000mm	220mm	220mm
12,000mm	6,500mm	220mm	220mm
12,000mm	8,000mm	240mm	260mm

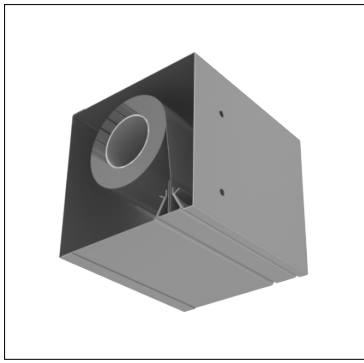


Side guides

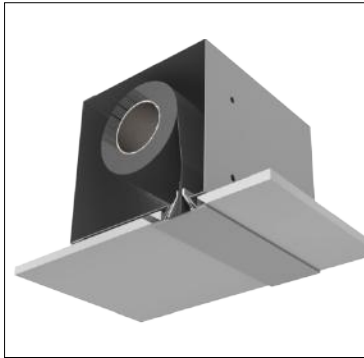
Manufactured from the same galvanised steel as the headbox, the side guides are designed to withstand the pressures caused by a fire. The side guides are available in all standard and non-standard RAL colours.

Fire Curtain Width	Fire Curtain Height	Side Guide Dims	
		X	Y
12,000mm	4,500mm	120mm	70mm
12,000mm	>4,500mm	130mm	70mm

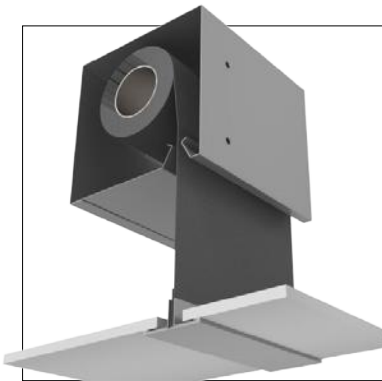




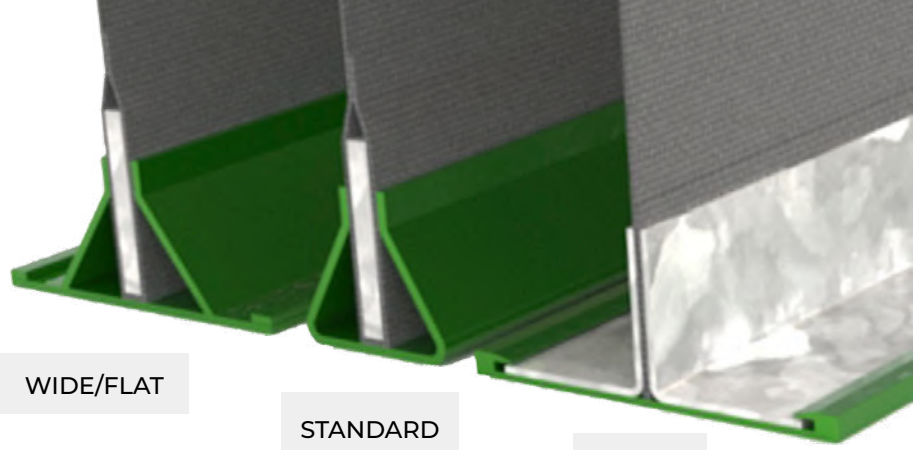
HEADBOX



UP AGAINST CEILING



WITH DROP CEILING



WIDE/FLAT

STANDARD

T-BAR

Bottom bar types

Standard bar

Description – The standard bar fits snugly inside the headbox, creating a completely flat surface, and giving a more aesthetically pleasing finish when the headbox is visible.

Notes - Variations of the standard bar are also available that are suitable for installations on angled surfaces like ramps.

Wide/flat bottom bar

Description – The wide bottom bar is best if you wish to plasterboard under the headbox, as it will sit flush with the ceiling.

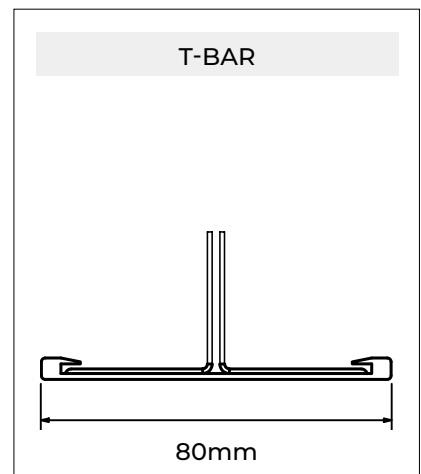
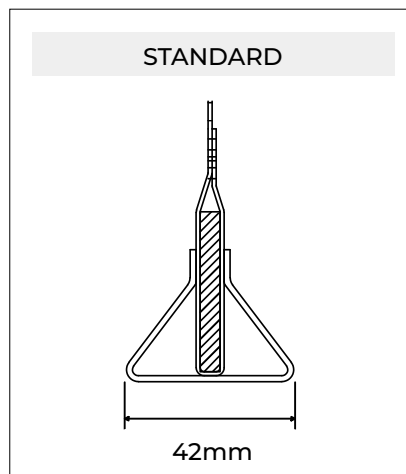
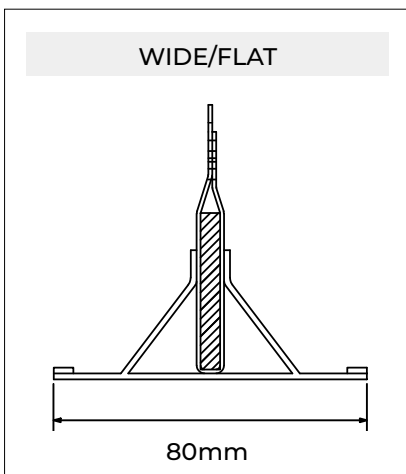
Notes – The plasterboard ceiling is installed after the headbox.

T-Bar

Description – The T-bar is best for drop/false ceilings where the headbox is not immediately above the ceiling.

Notes – Additional support is required for the ceiling, where the bottom bar contacts the ceiling to withstand the force applied by the bottom bar.

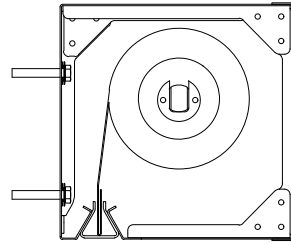
Bottom bar sizes



Fixing types

Face fixed

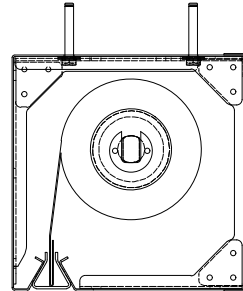
Face fixing is commonly used to install fire curtains around doorways. With this fixing method, you do not lose any of your opening.



FACE FIXED

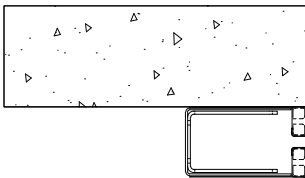
Reveal fixed

Reveal fixing allows for a completely hidden fire curtain, commonly used in offices. With this fixing method, you will lose the width of the guides from your clear opening (max 260mm, 130mm from each side) unless concealed in the wall make-up.

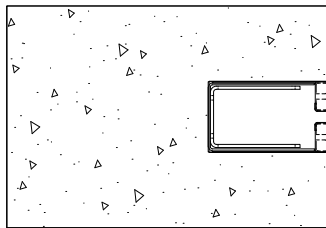


REVEAL FIXED

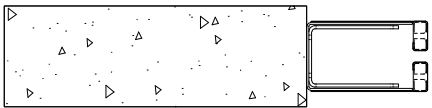
FACE FIXED



EMBEDDED



REVEAL FIXED

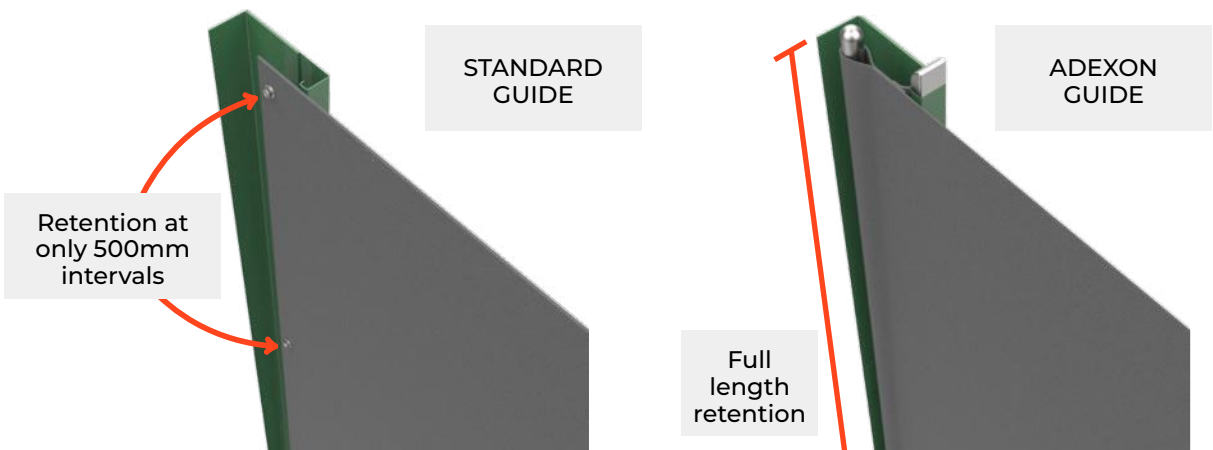


Fabric retention

Adexon's guides have a unique fabric retention system that differs from all other UK manufacturers, utilising a full length retention design, instead of poppers/bolts retention every 500mm that is commonly used by others on the market.

This ensures the curtain will never;

- snag and fail to descend,
- be blown out of the guides because of high pressure.



Sprinkler system

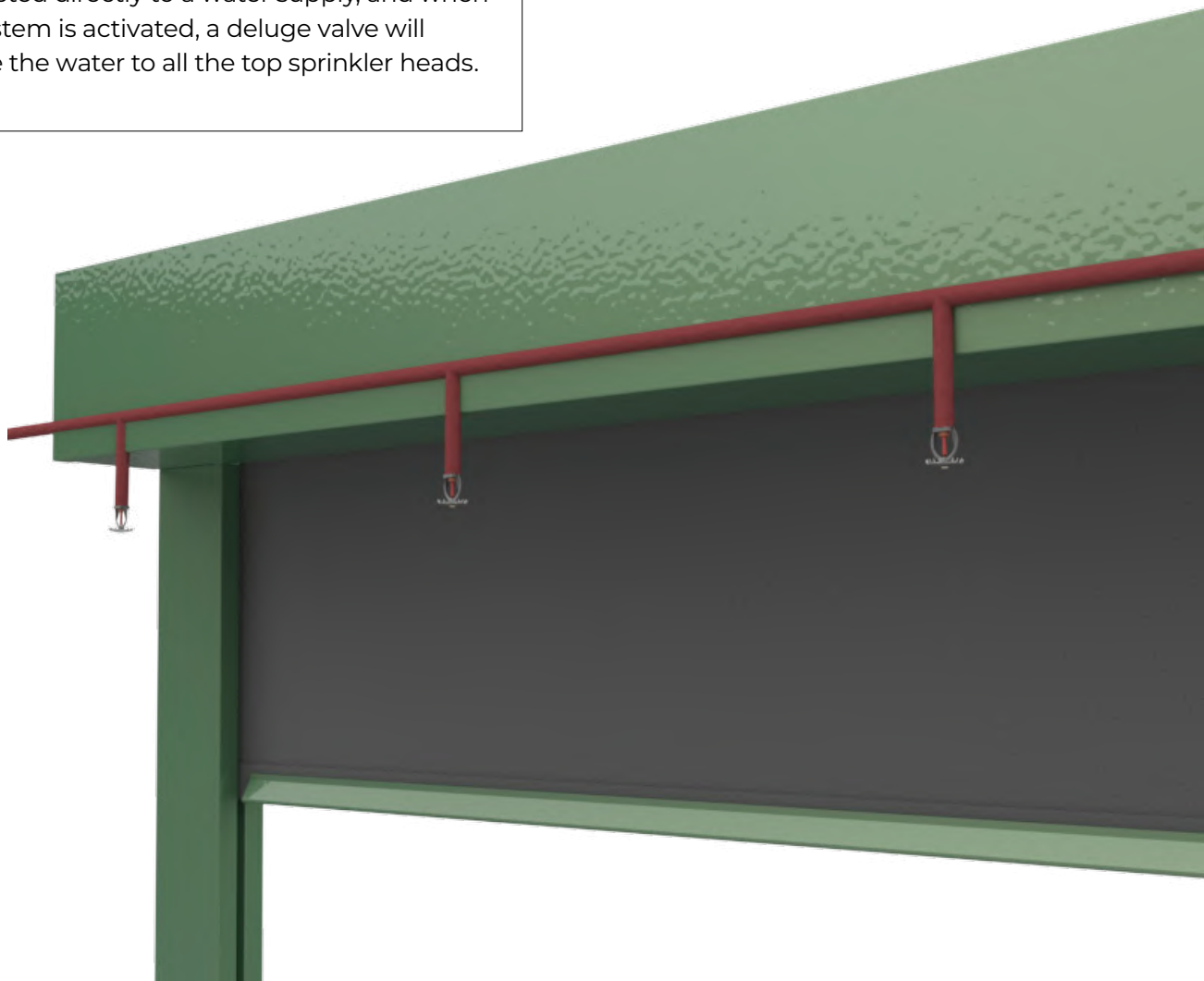
The Adexon-FC180EI works in conjunction with a sprinkler system; the sprinkler dampens the curtain fabric to stop heat transfer from one side to the other. The sprinkler can be an open nozzle activated via an electro-valve, or a closed sprinkler activated by a thermal fuse.

Closed nozzle

Closed sprinkler systems are most common, where the pipes are constantly filled with water and pressurised; the system is activated via a thermal fuse that, when heated, breaks and allows the water to pass through.

Open nozzle

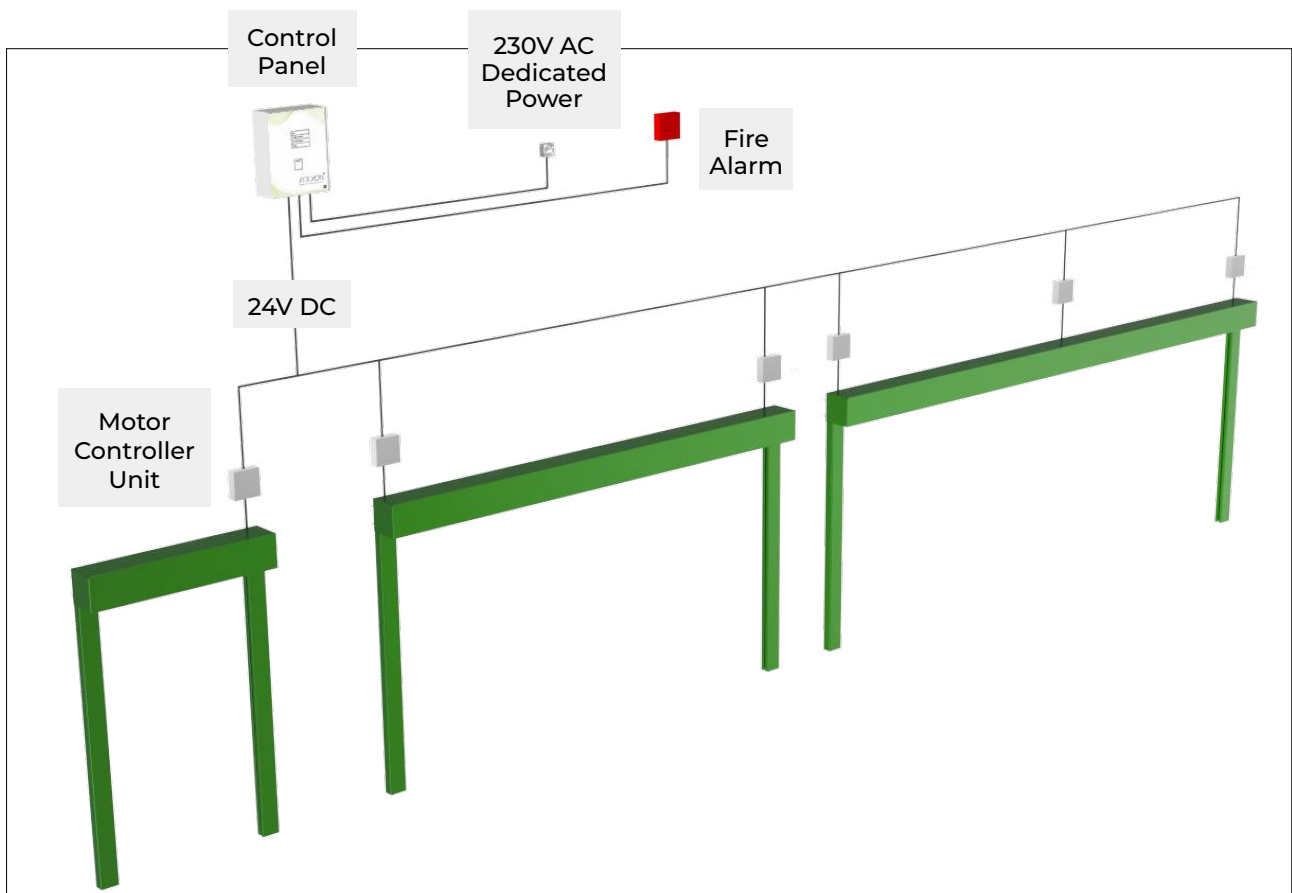
Open nozzle sprinkler systems are unpressurised dry piping, with the system connected directly to a water supply, and when the system is activated, a deluge valve will release the water to all the top sprinkler heads.



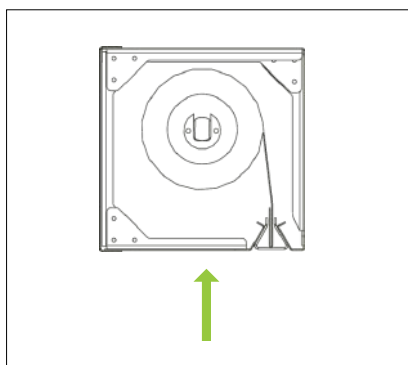
Site wiring

The Adexon control panel and motor controllers can be used to wire multiple curtains together. Standard single curtains require 230V AC, in a 6-amp fused spur. If multiple curtains are controlled by one control panel, the power supply required varies. The curtain is activated via a normally closed volt-free signal, which can be supplied by several source types, for example, a smoke alarm, fire alarm, BMS. When the smoke or fire curtain is fully retracted, our proprietary 24V DC tubular motor holds the curtain in its fire-ready position.

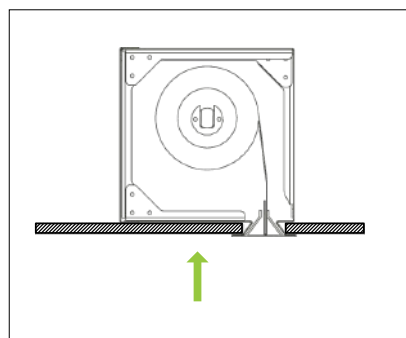
The motor unit does not feature a physical brake to hold the curtain in its fire-ready position. This ensures that the curtain will always have gravity fail-safe descent in situations where power is removed e.g. wires or control panels are damaged etc. Adexon's motors and control panels include built-in technology that control the speed of descent at a rate between 0.03 - 0.3 m/s, on both power and gravity fail-safe.



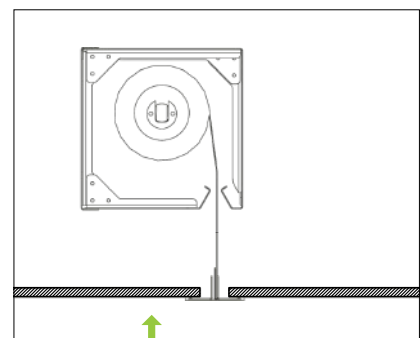
How is the headbox accessed after installation



Remove Headbox Section



Destructive Access or
Access Hatch



Destructive Access or
Access Hatch

Product specification

Under 16034:2014, our Adexon-FC180EI fire curtains obtained a fire rating of 180 minutes (3 hours) integrity (E) and insulation (I) rating of 180 minutes (3 hours), when tested to BS EN 1634-1:2014. Therefore the Adexon-FC180EI is classified as EI 180 in accordance with the classifications of BS EN 13501 2:2007+A1:2009.

The system can have smoke protection in accordance with BS EN 1634-3:2004.

Tenable area

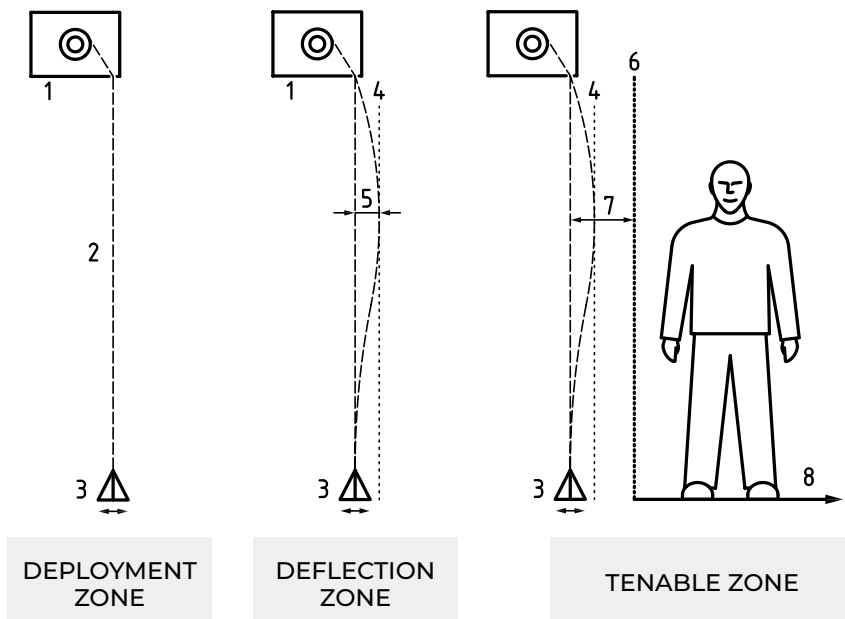
Protected escape routes must be of a minimum width to allow for safe emergency egress of the building occupants and must include space for the deployment zone, deflection zone and tenable zone. The size of your tenable area (deflection zone and tenable zone) will dictate the specification of the fire curtain that you must install to ensure sufficient protection.

Cycle test

The Adexon-FC180EI is cycle tested to class 1 (between 500 and 10,000 cycles) in accordance with BS EN 16034:2014.

Curtain fabric

Our fabric is manufactured from fibreglass strands woven between reinforcing stainless steel wires. The fabric is covered with a flame-retardant polyurethane compound on both sides. This provides a high level of fire resistance tested to above 1000°C and the pressure and temperature associated with a fire..



Uniclass Specification

Adexon-FC180EI Vertical Fire Curtain (Integrity & Insulation)

Pr_25_80_79_94 Vertical active fire curtain barriers (Adexon Vertical FC180EI)

1. Description: A vertically operating active fire curtain barrier with in-built integrity (E) and insulation (I) rating. This limits and controls the spread of fire (E) while also reducing temperatures on the face of the curtain to <math><140^{\circ}\text{C}</math> (I), with the maximum classification of 180 minutes. Works in conjunction with a sprinkler system.
2. Manufacturer:
Adexon Fire & Smoke
Prospect House
Huyton Church Road
Liverpool L36 5SH

t: 0151 422 9111
e: admin@adexon-uk.com
w: www.adexon-uk.com
3. Product reference: Adexon-FC180EI Vertical Fire Curtain (Integrity & Insulation)
4. Operation: Automatic, using 24V DC tubular motors, controlled by an electronic control board. Standard single curtains require dedicated 230V AC, in a 6-amp fuse spur.
5. Standards:
 - 5.1. Barrier assemblies: CE Marked to BS EN 16034
 - 5.2. Test standards: Safety & performance to BS EN 16034, Fire resistance to BS EN 1634-1, in accordance with BS EN 13501-2
6. Third-party certification: Applus+ Certificate AFP-1974
7. Size: Curtain max. dimensions - 22 x 17m (width x height)

Determine project requirements on a curtain-by-curtain basis through detailed design and scheduling. Refer to drawings for locations
8. Performance:
 - 8.1. Durability class: C1
 - 8.3. Fire resistance: EI 180 (requires a minimum water irrigation of 0.34m³/h·m² for all curtain area)
10. Deployment: Determine requirements on a curtain-by-curtain basis
11. Activation: As advised by the Client's Designers, may vary on a location-by-location basis
12. Finish: All headbox and rail components shall be made from galvanised steel as standard. Powder coating available (C1-5) to RAL colour to be advised by the Client's Architect.
13. Accessories: Determine requirements on a curtain-by-curtain basis

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E&OE

